

REMARKS / DISCUSSION OF ISSUES

Claims 1-7, and 10-12 are pending in this Application.

Claims 6, 7, 11 and 12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. Claims 6 and 10 have been amended. The amendment of claims 6 and 10 is believed to obviate the objection to claims 6, 7, 11 and 12.

Claims 1-7 are rejected under 35 USC 103(a) as being unpatentable over Delamarche et al (J. Am. Chem Soc. 2002, 124, 3834-3835).

Claim 2 has been amended and Claim 3 has been canceled. Claims 4 and 5 have been amended to remove any dependency on Claim 3.

As stated in Claim 1, Applicants' invention is directed to a method for applying a self-assembled monolayer of a molecular species to a surface of an article by providing on at least a portion of a stamping surface of a stamp a self-assembled monolayer-forming molecular species having a first functional group selected to attach to said surface, and a second functional group that is exposed when the species form a monolayer, said second group being polar, transferring the molecular species from the stamping surface to a first portion of the article surface, and allowing the molecular species to spread evenly from the first portion of the article surface to a second portion of the article surface, characterized in that the spreading is accomplished with the stamp and the article is placed in a vacuum or in a gaseous atmosphere.

Claim 2 has been amended. As stated in Claim 2, Applicants' invention is directed to a method for applying self-assembled monolayers of two molecular species to a surface of an article, by providing on at least a portion of a stamping surface of a stamp a first self-assembled monolayer-forming molecular species having a first functional group selected to attach to said surface, and a second functional group that is exposed when the species form a monolayer, said second group being polar, transferring the molecular species from the stamping surface to a first portion of the article surface, characterized by providing on at least a portion of a stamping surface of a stamp a second self-assembled monolayer forming

molecular species having a first functional group selected to attach to said surface, and a second functional group that is exposed when the species form a monolayer, said second group being polar or non-polar, transferring the molecular species from the stamping surface to said first portion of the article surface coated with a monolayer of said first molecular species, and allowing the second molecular species to spread evenly over the first monolayer to a second portion of the article's surface, characterized in that the spreading is accomplished with the stamp and the article is placed in a vacuum or in a gaseous atmosphere.

Applicants are stating that one advantage of the printing method of the invention is that the printing may be performed in a gaseous atmosphere, such as air and the stamp and the article does not need to be immersed in a liquid, such as water. The method according to Applicants' invention is performed much more easily than any prior art method. (Specification, page 4, lines 24-28). The invention provides for improved controllability, with the amount of spreading controlled by contact time between stamp surface and article surface. (Specification, page 4, line 29-33).

The Examiner is stating that Delamarche does not specifically teach "allowing the molecular species to spread evenly from the first portion of the article surface to a second portion of the article surface characterized in that the spreading is accomplished with the stamp". Delamarche does not specifically teach "allowing the second molecular species to spread evenly over the first monolayer to a second portion of the article's surface." Delamarche fails to specifically teach that "the second molecular species is applied via a stamping process." Delamarche is silent in regards to the atmosphere of the stamping process. Delamarche teaches the use of an ethanol solution. Delamarche teaches that the limiting factor for the formation of a more complete printed monolayer is the affinity of PTMP for PDMS rather than the inking and printing conditions used. (First full paragraph, page 3835)

Applicants respectfully disagree with the Examiner interpretation. Since Delamarche specifically states that the limiting factor for the formation of a more complete, printed monolayer is the affinity of PTMP for PDMS rather than the inking

and printing conditions used, is silent in regards to the atmosphere of the stamping process, and teaches placing the second species without a stamping process, Applicants would not be reasonably expected to look to Delmarche to solve the problem of a providing for a method with improved controllability wherein the amount of spreading is controlled by the contact between the stamp surface and the article surface and the stamp and the article are placed in a vacuum or in a gaseous atmosphere.

Therefore claim 1 and amended claim 2 are not rendered obvious by Delamarche. Claims 4-7 which depend therefrom are also not rendered obvious by Delamarche.

Claims 10 and 12 are rejected under 35 USC 103(a) as being unpatentable over Delamarche as applied to claim 1, further in view of Geissler et al (Langmuir, 2002, 18, 2374-2377) and Xia et al (Angew. Chem. Int. Ed 1998, 37, 550-575).

As stated above, Claim 1 is not rendered obvious by Delamarche. Claim 10 which incorporates the limitation of claim 1 and Claim 12 which is dependent on Claim 10 are not rendered obvious by Delamarche alone or in combination with Geissler and Xia.

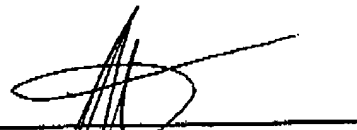
Claim 11 is rejected under 35 USC 103(a) as being unpatentable over Delamarche, Geissler and Xia as applied to Claim 10, and further in view of Katz (US Pat. No. 6,403,397).

As stated above, Claim 10 is not rendered obvious by Delamarche, Geissler and Xia. Claim 11 depends from Claim 10 and incorporates all the limitations of Claim 10. Therefore Claim 11 is not rendered obvious by Delamarche, Geissler and Xia together or in combination with Katz.

In view of the foregoing amendments, Applicant respectfully requests that the Examiner withdraws the objections of claim 6, 7, 11 and 12 and rejections of claims 1-7 and 10-12, and finds the Application in condition for allowance.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact Eric Bram at (914) 333-9635.

Respectfully submitted,



Lina Genovesi
Reg. No. 35,154
Attorney for Applicants
24 Clover Lane
Princeton, New Jersey 08540
Phone: (609) 462-4337
Fax: (609) 688-0126